

AMENDMENTS TO THE CLAIMS:

Please cancel claims 1-41 and add New claims 42-60:

1-41 (Canceled)

42. (New) A method for scanning in an X-ray apparatus, said method comprising:

providing an arrangement for detecting X-ray radiation, said arrangement comprising: an essentially planar member of a material non-transparent to X-rays and that has an elongated slot formed therein to provide a collimator for X-rays; a carrying member having detectors on a side thereof, said detectors including a plurality of sensors provided on a substrate; said detectors being arranged substantially edge-to-edge and side-by-side in at least one row on said side of said carrying member and said detectors comprising a sensor plane being substantially parallel to a surface of said carrying member and said carrying member being arranged so that said sensor plane is angularly oriented otherwise than perpendicular to incident X-ray beams, and wherein at least two detectors are arranged in at least two levels, said levels being displaced relative one to another such that an inactive section of at least one detector is overlapped with an active section of said other detector;

starting a scan from a first position and said collimator and said detectors having a first speed;

bringing said collimator and said detectors to a maximum, substantially constant speed when all of said collimator and said detectors are in the field of view; and

bringing said collimator and said detectors to a third speed, wherein an acceleration time before said scan reaches a maximum speed and a deceleration time before said scan stops is determined in such a way that parts of an image, where the acceleration and deceleration take place, obtain substantially a same photon statistics as the rest of said image.

43. (New) The method according to claim 42 wherein said sensor plane is arranged in parallel to incident X-ray beams.

44. (New) The method according to claim 42 wherein said carrying member is tilted to arrange said sensor plane in said angle.

45. (New) The method according to claim 42 wherein said detector is arranged on a supporting member.

46. (New) The method according to claim 42 wherein said detectors comprise a scintillator optically connected to a device selected from the group consisting of a charge coupled device (CCD), silicon diodes, and a gaseous detector, such as a parallel plate chamber where the gas volume is oriented edge-on to the incident X-ray's.

47. (New) The method according to claim 42 wherein said essentially planar member further comprises a plurality of slots arranged in at least two rows, and said slots in each row are displaced relative each other.

48. (New) The method according to claim 42 further comprising a beam directing member constituting one of a refracting and focusing member.

49. (New) The method according to claim 42 further comprising:

means for acquiring data from a plurality of detector arrays at intervals corresponding to a fraction of a width of said detector arrays.

50. (New) The method according to claim 49 wherein sensors of said detector arrays are made of silicon wafers oriented substantially edge-on to incident X-rays.

51. (New) An X-ray apparatus comprising:

an essentially planar member of a material non-transparent to X-rays and that has an elongated slot formed therein to provide a collimator for X-rays;

a carrying member having detectors on a side thereof, said detectors including a plurality of sensors provided on a substrate; and

said detectors being arranged substantially edge-to-edge and side-by-side in at least one row on said side of said carrying member and said detectors comprising a sensor plane being substantially parallel to a surface of said carrying member and said carrying member being arranged so that said sensor plane is angularly oriented otherwise than perpendicular to incident X-ray beams, and wherein at least two detectors are arranged in at least two levels, said levels being displaced relative one to another such that an inactive section of at least one detector is overlapped with an active section of said other detector.

starting a scan from a first position and said collimator and said detectors having a first speed;

bringing said collimator and said detectors to a maximum, substantially constant speed when all of said collimator and said detectors are in the field of view; and

bringing said collimator and said detectors to a third speed, wherein an acceleration time before said scan reaches a maximum speed and a deceleration time before said scan stops is determined in such a way that parts of an image, where the acceleration and deceleration take place, obtain substantially a same photon statistics as the rest of said image.

52. (New) The apparatus according to claim 51 wherein said sensor plane is arranged in parallel to incident X-ray beams.

53. (New) The apparatus according to claim 51 wherein said carrying member is tilted to arrange said sensor plane in said angle.

54. (New) The apparatus according to claim 51 wherein said detector is arranged on a supporting member.

55. (New) The apparatus according to claim 51 wherein said detectors comprise a scintillator optically connected to a device selected from the group consisting of a charge coupled device (CCD), silicon diodes, and a gaseous detector, such as a parallel plate chamber where the gas volume is oriented edge-on to the incident X-ray's.

56. (New) The apparatus according to claim 51 wherein said essentially planar member further comprises a plurality of slots arranged in at least two rows, and said slots in each row are displaced relative each other.

57. (New) The apparatus according to claim 51 further comprising a beam directing member constituting one of a refracting and focusing member.

58. (New) The apparatus according to claim 51 further comprising:

means for acquiring data from a plurality of detector arrays at intervals corresponding to a fraction of a width of said detector arrays.

59. (New) The apparatus according to claim 58 wherein sensors of said detector arrays are made of silicon wafers oriented substantially edge-on to incident X-rays.